

REMARKS

This Office Action response is submitted in response to the Office Action dated February 1, 2006, having a shortened statutory period set to expire May 1, 2006. Claims 1-3, 8, 10, 12-13, 15, 17-19, 20, and 22 have been amended. No new matter has been added.

CLAIMS OBJECTIONS

In the present Office Action, Claims 2, 9, 14, and 19 are objected to because of informalities. Specifically, Examiner asserts that the recitation of "a grain of data" in Claims 2, 9, 14, and 19 does not have support in the Specification. Applicants respectfully disagree and direct Examiner to page 15, lines 4-9, which discloses the following:

As will be clear to one skilled in the art, the metadata components (208, 222) may suitably be embodied as bitmaps, wherein each bit may represent some uniformly-sized or approximately uniformly-sized assemblage of data. Such an assemblage of data is conventionally called a grain.

Therefore, in light of the above-cited passage in the Specification, Applicants respectfully request that the objections regarding Claims 2, 9, 14, and 19 be withdrawn.

CLAIMS REJECTIONS UNDER 35 U.S.C. § 102

In the present Office Action, Claims 1-5, 8-22 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Orhan* (U.S. Patent Number 5,835,935). After careful consideration of Examiner's remarks, Applicant respectfully submits that Claims 1-5, 8-22, now amended, are not anticipated or suggested by *Orhan* and respectfully traverses Examiner's rejection in view of the arguments submitted herein.

Regarding exemplary Claim 1, nothing in *Orhan* teaches or suggests "said metadata component being operable to limit synchronization of said secondary copy when uploading said tertiary copy from said portable physical storage medium at said secondary to said portion of storage having said dirty state indicator at said primary." In col. 12, lines 5-10, the system disclosed in *Orhan* "only backs up those data blocks that have been changed." Also, as indicated in col. 6, lines 25-33, "[t]he present invention can utilize low bandwidth communication links to transfer backup data to a remote backup site." Therefore, the system and method disclosed in

Ohran clearly limits backups to changed data blocks, but sends the changed data blocks over a “low bandwidth communication link” to a remote backup site and does not “upload a tertiary copy from said portable physical storage medium” as claimed in Claim 1.

Referring to exemplary Claim 1, nothing in *Ohran* teaches or suggests “establishing a remote copy relationship between said primary, storing a primary copy, and a secondary, storing a secondary copy; [and] creating a tertiary copy of a storage space for download onto a portable physical storage medium for offline transport to said secondary for upload[.]” As indicated in col. 5, lines 39-42, “[t]he present invention begins with the assumption that a primary mass storage device connected to a backup device contain identical data.” Then, as indicated in col. 6, lines 25-33, “[t]he present invention can utilize low bandwidth communication links to transfer backup data to a remote backup site”. Therefore, the system and method disclosed in *Ohran* merely includes two copies of data, one stored in the primary and one stored in the backup and does not utilize a tertiary copy, as claimed in Claim 1. Nothing in *Ohran* teaches or suggests a primary storing a primary copy, a secondary storing a secondary copy and “creating a tertiary copy of a storage space for download onto a portable physical storage medium for offline transport to said secondary for upload”, as claimed in Claim 1.

Referring to Claim 1, nothing in *Ohran* teaches or suggests “a metadata component operable to store a *dirty state indicator* of a portion of a storage space at said primary after establishment of said remote copy relationship at said primary; and said metadata component being operable to limit synchronization at said secondary to said portion of storage having said dirty state indicator at said primary” (*emphasis added*). According to page 4 of the present Office Action, Examiner asserts that *Ohran* col. 12, lines 5-10 teaches or suggests the claimed element. Applicants respectfully disagree with Examiner’s assessment. Col. 12, lines 5-10 indicates that “[t]he present invention only backs up those data blocks that have been changed . . .” *Ohran* also merely alludes to a “map or other mechanism that was used to track which storage locations had data written therein between time T0 and T1” (col. 11, lines 30-32). Therefore, nothing in *Ohran* teaches or suggests “metadata component operable to store a dirty state indicator” as claimed in Claim 1.

Still regarding Claim 1, nothing in *Ohran* teaches or suggests “a copy component operable at said primary to create a tertiary copy for download onto a portable physical storage medium for *offline transport* to said secondary for upload[.] (*emphasis added*)” On page 3 of the

present Office Action, Examiner asserts that col. 10, lines 30-42 of *Ohran* discloses the claimed element.

Applicants respectfully disagree with Examiner's assessment of *Ohran*. Applicants assert that nothing in the cited passage teaches or suggests "offline transport" of a "portable physical storage medium" as claimed in Claim 1. In fact, *Ohran* clearly indicates the utilization of a "backup transport link 16" (Figure 2) and described in col. 10, lines 1-5 as a "local area network (LAN), a wide area network (WAN), a dial-up connection[,] which clearly implies that some sort of network or online connection is utilized to facilitate the flow of data between the primary and backup systems. Therefore, nothing in *Ohran* teaches or suggests the "offline transport" or a "portable physical storage medium" as claimed in Claim 1.

Accordingly, Applicants assert that independent Claim 1, similar Claims 8, 13, 18, and all dependent claims are not rendered unpatentable.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103

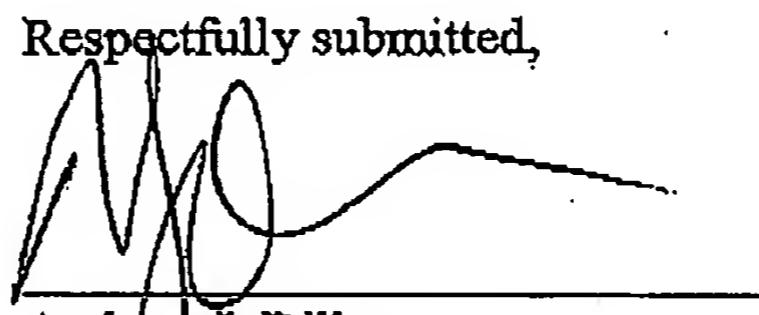
In the present Office Action, Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Ohran* (U.S. Patent No. 5,835,953) in view of *Kamvysselis* (U.S. Patent No. 6,941,429). On page 5 of the present Office Action, Examiner asserts that *Kamvysselis* describes an intelligent adapter card capable of providing data copying and backing up functions. However, Applicants assert that *Ohran* in view of *Kamvysselis* fails to overcome the deficiency noted above with respect to the primary reference (*Ohran*). Because Claims 6-7 are dependent on independent Claim 1 (asserted by Applicants to be not rendered unpatentable by the arguments above), Claims 6-7 are also not rendered unpatentable.

CONCLUSION

Applicants have diligently responded to the Office Action by amending the claims to overcome claim objections, § 102 and 103 rejections. Applicants have also provided discussion/arguments which show why Applicants' claims are not anticipated by not obvious in light of the references provided. Since the amendments and arguments overcome the § 102 and 103 rejections, Applicants, respectfully request issuance of a Notice of Allowance for all claims now pending.

Applicant further respectfully requests the Examiner contact the undersigned attorney of record at 512.343.6116 if such would further or expedite the prosecution of the present Application.

Respectfully submitted,



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